Amendments To The Claims

The listing of claims replaces all prior versions and listings of claims in the application. The listing of claims presenst each claim with its respective status shown in parentheses. Only those claims being amended herein show their changes in highlighted form, i.e., insertions appear as underlined text (e.g., insertions) while deletions appear as strikethrough text (e.g., ~~deletions~~). All previously amended claims appear as clean text.

Claims 1 - 3. (**Canceled**).

Claim 4. (**Currently Amended**) A method of determining blood oxygen saturation comprising:

sensing physiological signals resulting from the attenuation of light of at least first and second wavelengths by body tissue carrying pulsing blood;

determining at least two values corresponding to oxygen saturation based upon at least two alternative methods of using the physiological signals; and

determining a resulting value for oxygen saturation from the at least two values corresponding to oxygen saturation,

~~The method of Claim 1,~~

wherein one of the alternative methods comprises at least one calculation in the frequency domain.

Claim 5. (**Original**) The method of Claim 4, wherein the calculation in the frequency domain comprises performing a Fourier Transform on the physiological signals.

Claim 6. (**Currently Amended**) The method of Claim ~~1~~, wherein at least one of the at least two alternative methods comprises a calculation based on a ratio of a normalized representation of the physiological signal resulting from the first wavelength to a normalized representation of the physiological signal resulting from the second wavelength.

Claim 7. (**Original**) The method of Claim 6, wherein at least one of the at least two alternative methods comprises a calculation based on the physiological signals after they have been effected by a recursive polyphase bandpass filter.

Claim 5. (**Original**) The method of Claim 3, wherein at least one of the at least two alternative methods comprises a calculation based on the physiological signals after they have been effected by an adaptive implementation of a recursive polyphase bandpass filter.

Claim 6. (**Original**) The method of Claim 3, wherein at least one of the at least two alternative methods comprises a calculation based on the physiological signals after they have been effected by a bank of filters.

Claim 7. (**Original**) The method of Claim 3, wherein at least one of the at least two alternative methods comprises a calculation based on the physiological signals after they have been effected by a sum of squares analysis.

Claim 8. (**Original**) The method of Claim 3, wherein at least one of the at least two alternative methods comprises a calculation based on a scan of possible saturation values.

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Claim 9. (**Original**) The method of Claim 8, wherein the calculation based on a scan of possible saturation values comprises a discrete saturation transform.

Claim 10. (**Original**) The method of Claim 3, wherein at least one of the at least two alternative methods comprises a calculation based on determining values for saturation that minimize the correlation between a signal portion and a noise portion of at least one of the physiological signals.

Claim 11. (**Original**) The method of Claim 3, wherein at least one of the at least two alternative methods comprises a calculation based on the physiological signals after they have been effected by a Kalman filter.

Claim 12. (**Original**) The method of Claim 3, wherein at least one of the at least two alternative methods comprises a calculation based on the physiological signals after they have been effected by a neural network.

Claim 13. (**Original**) The method of Claim 3, wherein at least one of the at least two alternative methods comprises a calculation based on the physiological signals after they have been effected with spectral estimation techniques.

Claim 14. (**Original**) The method of Claim 3, wherein at least one of the at least two alternative methods comprises selecting at least one of the at least two values

based on characteristics of the physiological signals indicative of the quality of the physiological signals.

Claim 18. (**Currently Amended**) The method of Claim 6, wherein the step of determining comprises averaging the resulting value over time, said averaging dependent upon characteristics of the physiological signals indicative of the quality of the physiological signal.

Claim 19. (**Original**) The method of Claim 18, wherein the averaging is based on confidence in the quality of the physiological signals.

Claim 20. (**Original**) The method of Claim 19, wherein the confidence is determined by analyzing whether there is significant motion noise present in the physiological signals.

Claim 21. (**Original**) The method of Claim 6, wherein at least one of the at least two alternative methods comprises a calculation based on the physiological signals after they have been effected by an adaptive algorithm.

Claim 22. (**Original**) The method of Claim 21, wherein at least one of the at least two alternative methods comprises a calculation based upon a scan of values potentially indicative of said physiological parameter.

Claim 23. (**Original**) A method of determining pulse rate comprising:

sensing physiological signals resulting from the attenuation of light of at least first and second wavelengths by body tissue carrying pulsing blood;

determining at least two values corresponding to pulse rate based upon at least two alternative methods of processing the physiological signals; and

determining a resulting value for pulse rate from the at least two values corresponding to pulse rate.

Claim 24. (**Original**) The method of Claim 23, wherein the step of determining comprises selecting at least one of the at least two values based on a determination of confidence in the accuracy of physiological signals.

Claim 25. (**Original**) The method of Claim 23, wherein determining a resulting value comprises averaging the at least two values.

Claim 26. (**Original**) The method of Claim 25, wherein said step of averaging comprises averaging over a time window, wherein said window is increased

for potential of said physiological parameter having a lower confidence of accuracy and decreased for potential values of said physiological parameter having a higher confidence of accuracy.

Claim 27. (**Currently Amended**) The method of Claim ~~1~~, wherein each calculation technique relies on at least partially differing assumptions relating to at least one of the first and second intensity signals.

Claim 28. (**Currently Amended**) The method of Claim ~~1~~, wherein each of the at least two alternative methods relies on at least partially differing strengths associated with that alternative method.

Claim 29. (**Currently Amended**) The method of Claim ~~1~~, wherein each of the at least two alternative methods relies on at least partially differing behavior associated with that alternative method and dependent upon the first and second intensity signals.

Claim 30. (**Currently Amended**) The method of Claim ~~1~~, wherein utilization of at least two alternative methods reduces an effect of motion induced noise on the resulting value for oxygen saturation.

Claims 31 - 38. (**Canceled**)

Claim 39. (**Currently Amended**). A method of determining a physiological characteristic of pulsing blood, the method comprising:

receiving first and second intensity signals from a light-sensitive detector which detects light of at least first and second wavelengths transmitted through body tissue carrying pulsing blood;

providing at least first and second calculation techniques, wherein each calculation technique is capable of generating at least one value representative of the physiological characteristic of the pulsing blood; and

utilizing at least one of the first and second calculation techniques to determine a resulting value indicative of the physiological characteristic,

~~The method of Claim 31,~~

wherein at least one of the calculation techniques comprises a spectral domain technique.

Claims 40 - 41. (**Canceled**)

Claim 42. (**Currently Amended**) A method of determining a physiological characteristic of pulsing blood, the method comprising:

receiving first and second intensity signals from a light-sensitive detector which detects light of at least first and second wavelengths transmitted through body tissue carrying pulsing blood;

providing at least first and second calculation techniques, wherein each calculation technique is capable of generating at least one value representative of the physiological characteristic of the pulsing blood; and

utilizing at least one of the first and second calculation techniques to determine a resulting value indicative of the physiological characteristic,

~~The method of Claim 31,~~

further comprising generating at least one output value from each of the first and second calculation techniques and wherein the utilizing comprises combining the output values to determine the resulting value.

Claim 43. (**Previously Added**) The method of Claim 42, wherein the combining comprises averaging.

Claim 44. (**Previously Added**) The method of Claim 43, wherein the averaging comprises performing a weighted average.

Claim 45. (**Previously Added**) The method of Claim 42, wherein the utilizing comprises selecting one of the output values to determine the resulting value.

Claim 46. (**Previously Added**) The method of Claim 42, wherein each output value qualifies for inclusion in the combining under different conditions of the first and second intensity signals.

Claims 47 - 49. (**Canceled**)

Claim 34. (**Currently Amended**) A method of determining a physiological characteristic of pulsing blood, the method comprising:

receiving first and second intensity signals from a light-sensitive detector which detects light of at least first and second wavelengths transmitted through body tissue carrying pulsing blood;

providing at least first and second calculation techniques, wherein each calculation technique is capable of generating at least one value representative of the physiological characteristic of the pulsing blood; and

utilizing at least one of the first and second calculation techniques to determine a resulting value indicative of the physiological characteristic,

~~The method of Claim 31,~~

wherein each calculation technique relies on at least partially differing strengths associated with that calculation technique.

Claims 51 - 61. (**Canceled**)

Claim 35. (**Currently Amended**) A method of determining a physiological characteristic of pulsing blood, the method comprising:

receiving first and second intensity signals from a light-sensitive detector which detects light of at least first and second wavelengths transmitted through body tissue carrying pulsing blood; and

utilizing at least one of at least first and second calculation techniques to determine a value representing the physiological parameter,

~~The method of Claim 54,~~

further comprising qualifying the value for inclusion into the step of utilizing depending upon different conditions of the first and second intensity signals.

Claims 63 - 66. (**Canceled**)

Claim 36. (**Currently Amended**) A method of determining blood oxygen saturation, the method comprising:

receiving first and second intensity signals from a light-sensitive detector which detects light of at least first and second wavelengths transmitted through body tissue carrying pulsing blood;

based on a first technique, calculating a first possible value indicative of oxygen saturation of the pulsing blood;

based on a second technique different from the first technique, calculating a second possible value indicative of the oxygen saturation; and

determining a representative output value of the oxygen saturation based on the first and second possible values indicative of the oxygen saturation,

~~The method of Claim 65,~~

wherein at least one of the first and second techniques comprises a spectral domain technique.

Claims 68 - 70. (**Canceled**)

Claim 71. (**Currently Amended**) A method of determining blood oxygen saturation, the method comprising:

receiving first and second intensity signals from a light-sensitive detector which detects light of at least first and second wavelengths transmitted through body tissue carrying pulsing blood;

based on a first technique, calculating a first possible value indicative of oxygen saturation of the pulsing blood;

based on a second technique different from the first technique, calculating a second possible value indicative of the oxygen saturation; and

determining a representative output value of the oxygen saturation based on the first and second possible values indicative of the oxygen saturation,

~~The method of Claim 65,~~

wherein each of the first and second techniques relies on at least partially differing strengths associated with that technique.

Claims 72 - 77. (**Canceled**)

Claim 78. (**Currently Amended**) A method of determining blood oxygen saturation comprising:

receiving first and second intensity signals from a light-sensitive detector which detects light of at least first and second wavelengths transmitted through body tissue carrying pulsing blood;

determining at least two values indicative to oxygen saturation based upon at least two different methods of obtaining data from the first and second intensity signals; and

determining a resulting value indicative of oxygen saturation from the at least two values,

~~The method of Claim 76,~~

wherein each different method relies on at least partially differing strengths associated with that different method.

Claims 79 - 84. (**Canceled**)

Claim 85. (**Currently Amended**) A method of monitoring blood oxygen saturation of pulsing blood during motion induced noise, the method comprising:

receiving first and second intensity signals from a light-sensitive detector which detects light of at least first and second wavelengths transmitted through body tissue carrying pulsing blood; wherein the fist and second intensity signals include motion induced noise;

determining at least two values corresponding to oxygen saturation based upon at least two different methods of obtaining data from the first and second intensity signals; and

determining a resulting value for oxygen saturation from the at least two values corresponding to oxygen saturation,

~~The method of Claim 83,~~

wherein each different method relies on at least partially differing strengths associated with that different method.

Claims 86 - 89. (**Canceled**)